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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|-------------------------------|---------------------|------------------|
| 09/787,095 | 03/13/2001 | Gijsbert Joseph Van Den Enden | PHN 17,554 | 1084 |

24737 7590 11/30/2005

PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER

AGUSTIN, PETER VINCENT

| ART UNIT | PAPER NUMBER |
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2652

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/787,095

Applicant(s)

VAN DEN ENDEN, GIJSBERT
JOSEPH

Examiner

P. Agustin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

1. Claims 1-20 are now pending.

Claim Objections

2. Claims 7, 8 & 19 are objected to because of the following informalities:

Claim 7, line 6: "to be a measured" should be --in response to the measured--.

Claim 8, line 2: The claim is incomprehensible and grammatically confusing.

Appropriate correction is required. The Examiner suggests replacing "spots already" with --spots where a piece already--, consistent with Applicant's specification.

Claim 19, line 1: Please add a comma after "Claim 18".

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 1 recites that "a reflection is measured from the spot of only one of the states and a measured value of the reflection is used for controlling the power of the laser diode for writing both states". It is not disclosed how this function is achieved.

Claim 2 recites that “the reflection is measured at spots where a piece already in a highly reflective state is overwritten with a highly reflecting state”. It is not disclosed how this function is achieved.

Claims 4 & 5 recite comparing a detector measurement to a reference value and adjusting laser power based on this measurement. The Applicant’s disclosure does not recite a specific value or a range for the claimed “reference value” which will enable one of ordinary skill in the art to make a device that measures a reflection from a written spot of “only one of the states” during writing.

Claim 7 recites a “means for measuring a reflection from a written spot of only one of the states during writing” which appears to correspond to the peak value detector 6 in Figure 1. It is not disclosed how the peak value detector is configured to measure a reflection from a written spot of “only one of the states”.

Claim 7 recites a “means for controlling the power of the laser diode” which appears to correspond to the element 1 in Figure 1, which consists of a multiplying stage 11, summing stage 12, and a control network (for determining time-dependent control behavior) 13. It is not clearly disclosed how these elements are interrelated and how this combination of elements is configured to achieve power control.

Claim 8 recites that the means for measuring the reflection “measures at spots already written in a highly reflecting state is being overwritten with a highly reflecting state”. It is not disclosed how the peak value detector is configured to perform this function.

Claims 10 & 11 have similar limitations as claims 4 & 5.

Claims 2-5 & 8-20 are dependent upon rejected base claims.

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5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-6 & 17-20 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: e.g., means or structural elements for providing the claimed results, i.e., recording two different states, adjusting a power level, measuring from the spot of only one of the states, controlling the power for writing both states, etc.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 2, 6-8 & 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Aoki (US 5,712,839).

In regard to claim 1, Aoki discloses an electronic optical recording device (Figure 2) for optical recording on rewritable media (MD), with which two different states (note “phase-change-type”, “erase power” and “recording power” in column 4, lines 52-61) can be recorded by adjusting a power level of a laser diode (1) depending on information content to be generated on the media, characterized in that during writing of the states, a beam from the laser diode is focused upon a spot that is written for one of the states (column 4, lines 66-67: “when the light source 1 radiates the light having the bias power (the erase power)”), a reflection is measured

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from the spot of only one of the states (column 4, line 62 thru column 5, line 1: note “when the light source 1 radiates the light having the recording power, the reflection light from the recording medium **is not monitored**” and “when the light source 1 radiates the light having the bias power (the erase power), the reflection light from the recording medium **is monitored**”) and a measured value of the reflection is used for controlling the power of the laser diode for writing of both states (column 6, lines 58-61).

In regard to claim 2, Aoki discloses that the reflection is measured at spots where a piece already in a highly reflecting state is overwritten with a highly reflecting state (note “phase-change-type” and “erase power” in column 4, lines 52-61, which “erase power” is known in the art to provide a highly reflecting state when used in a phase-change-type recording medium).

In regard to claim 6, Aoki discloses that the reflection is measured when a highly reflective state is written (note “phase-change-type” and “erase power” in column 4, lines 52-61, which “erase power” is known in the art to provide a highly reflective state when used in a phase-change-type recording medium).

In regard to claim 7, Aoki discloses an electronic optical recording device (Figure 2) for optical recording on rewritable media (MD) that records by adjusting a power level of a laser diode (1) to one of two different states (note “phase-change-type”, “erase power” and “recording power” in column 4, lines 52-61) depending on information content to be recorded on the media, comprising: means (2 & 3) for measuring a reflection from a written spot of only one of the states during writing (column 4, line 62 thru column 5, line 1: note “when the light source 1 radiates the light having the recording power, the reflection light from the recording medium is not monitored” and “when the light source 1 radiates the light having the bias power (the erase

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power), the reflection light from the recording medium is monitored"); and means (6 & 7) for controlling the power of the laser diode to be a measured value of the reflection for writing both states (column 6, lines 58-61).

Claims 8 & 12 have limitations similar to those of claims 2 & 6; thus, they are rejected on the same basis.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 3-5, 9-11 & 13-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki in view of Johann et al. (US 5,184,343).

For a description of Aoki, see the rejections above. Furthermore, Aoki discloses: in regard to claim 3, that a DC level detector (Figure 2, element 3) measures reflected light; in regard to claim 4, that the DC level detector measurement is compared to a reference value (output of element 4); in regard to claim 5, that the power of the laser diode is adjusted if a comparison of the DC level detector to the reference value indicates a deviation (column 4, lines 48-51); in regard to claim 14, that the deviation results in the means for controlling the power of the laser diode to be readjusted (see last five lines of abstract); in regard to claim 15, that the laser diode as readjusted is retained for writing low-reflection states (column 5, lines 31-42); and in regard to claim 16, that the rewriteable media is channel coded (it is known in the art that

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optical information is typically channel coded prior to being recorded, e.g., eight-to-fourteen modulation; therefore, this feature is inherently taught by Aoki).

Aoki does not disclose: in regard to claims 3-5, measuring reflected light using “a signal peak detector”; and in regard to claim 13, that the deviation occurs as a result of soiling of the rewritable media.

Johann et al. disclose: in regard to claims 3-5, measuring reflected light using a signal peak detector (Figure 3, element 30); and in regard to claim 13, a deviation occurs as a result of soiling of an optical disk (apparent from the title).

In regard to claims 3-5, at the time of invention by the Applicant, it was well known to use either a DC level detector or a signal peak detector for the same purpose of measuring reflected light; therefore, one of ordinary skill in the art would have recognized that either techniques are obvious variants of each other. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention by the Applicant to have measured the reflected light of Aoki using the signal peak detector of Johann et al. because both techniques are art-recognized equivalent alternative techniques used for the same purpose of measuring reflected light, and therefore, one of ordinary skill in the art would have expected the Applicant's invention to perform equally well with either technique.

In regard to claim 13, it would have been obvious to one of ordinary skill in the art at the time of invention by the Applicant to have applied the teachings of Johann et al. to the device of Aoki, the motivation being to compensate for errors caused by dust particles on the surface of the disk (see abstract).

Claims 9-11 & 17-20 have limitations similar to those of claims 3-5 & 13-16; thus, they are rejected on the same basis.

Response to Arguments

11. Applicant's arguments filed October 10, 2005 have been fully considered but they are not persuasive.

a. On page 5, paragraph 3, the Applicant disagrees with the Examiner's taking of Official Notice that measuring reflected light using either a signal peak detector (as claimed) or a DC level detector (as taught by Aoki) are obvious variants of each other. The Applicant disagrees because allegedly, the use of a signal peak detector as defined by the rejected claims to measure a reflection from the spot of only one of the states and use of a measured value of the reflection for controlling the power of the laser diode for writing of both states is not well known in the art. This argument is not persuasive because the Applicant attacks the references individually where the rejection is based on the combination of references, i.e., Aoki in view of knowledge available in the art. The previous Office Action acknowledged that Aoki does not disclose measuring reflected light using "a signal peak detector". In order to cure this deficiency, the Examiner took Official Notice that measuring light using a signal peak detector is well known, and that measuring reflected light using a signal peak detector (as claimed) and measuring reflected light using a DC level detector (as taught by Aoki) are obvious variants of each other. The Applicant is directed to Figure 3 of Johann et al. (US 5,184,343), which shows a signal peak detector 30 for measuring reflected light, and thereby proving that such technique is old and notoriously well known.

Furthermore, the Applicant requests that the Examiner produce prior art references that disclose subject matter for the use of signal peak detector to measure a reflection from the spot of only one of the states and use a measured value of the reflection for controlling the power of the laser diode for writing of both states. The Examiner declines to produce such prior art. As noted above, the Applicant is attacking references individually where the rejection is based on the combination of references. The Aoki reference discloses all these features except measuring reflection using a signal peak detector, which missing feature has been cured by the Examiner's taking of Official Notice. The citing of the Johann et al. reference above is deemed sufficient evidentiary support for said Official Notice.

b. On page 5, paragraph 4, the Applicant argues that the term "spots already" (recited in claim 8) is not informal and therefore disagrees that it should be replaced. The Examiner disagrees. The use of this phrase deems claim 8, as a whole, incomprehensible and grammatically confusing. The Examiner suggested replacing this phrase with language consistent with the Applicant's specification.

c. On page 6, paragraph 5 thru page 8, paragraph 2, the Applicant traverses the 112-1st paragraph rejection of claim 1. The Applicant alleges that "Regarding Claim 1, the Examiner's position is that the terminology "a reflection is measured... for writing of both states" is not disclosed". The Examiner would like to clarify that this allegation is false. The Examiner never made or suggested such statement. The Applicant is directed to page 3, second paragraph of the previous Office Action, which indicates that while claim 1 recites the claimed feature, it is not disclosed how this function is achieved. The

Applicant presented arguments directed merely towards desired results and alleged advantages. In order to overcome the rejection, the Applicant needs to cite specific sections of the specification that sufficiently show how the claimed function is achieved in order to enable one of ordinary skill in the art to make and use the invention.

Otherwise, the Applicant can persuasively argue that the specification need not provide details on how to make and use the invention since a claimed function is well known in the art, and then supplement by evidence that supports such argument.

d. On page 8, paragraph 3, the Applicant traverses the 112-1st paragraph rejection of claim 2. Again, the Applicant recited sections in the specification directed towards desired results and alleged advantages. Therefore, the arguments are not found persuasive. The Applicant further points out the example in the sole Figure that allegedly shows an embodiment for detecting and measuring the reflection. However, this is example is not sufficient to enable one of ordinary skill in the art to realize the claimed function of measuring reflection “at spots where a piece already in a highly reflective state is overwritten with a highly reflecting state”.

e. On page 8, paragraph 4, the Applicant traverses the 112-1st paragraph rejection of claim 4 and insists that the disclosure of the invention enables one skilled in the art to use a reference value to measure reflections of writing spots for only one state during writing. The Examiner disagrees. As noted in page 3, paragraph 4, the Applicant’s disclosure does not recite a specific value or a range for the claimed “reference value” which will enable one of ordinary skill in the art to make a device that measures a reflection from a written spot of “only one of the states” during writing. The Applicant alleges that “any person of

ordinary skill within the art will quickly and readily understand how to implement a signal peak detector measurement compared within a reference value for only one of the states during writing”. This is not found persuasive because this is merely a statement of allegation without any evidentiary support.

f. On page 8, last paragraph, the Applicant traverses the 112-1st paragraph rejection of claim 5. Again, the Applicant recited sections in the specification directed towards desired results, and none towards sufficient enablement of the claimed subject matter. Therefore, the arguments are not persuasive. Furthermore, as noted above, the Applicant’s disclosure does not recite a specific value or a range for the claimed “reference value” which will enable one of ordinary skill in the art to make a device that measures a reflection from a written spot of “only one of the states” during writing.

g. On page 9, paragraph 2, the Applicant traverses the 112-1st paragraph rejection of claim 7, again pointing out sections in the specification directed towards desired results. The arguments are not persuasive for the same reasons noted above.

h. On page 9, paragraph 3, the Applicant alleges that a person of ordinary skill in the art would readily understand how to enable the subject matter for laser power control using reflections from highly-reflective states to readjust power when writing both states; and that a person of ordinary skill in the art would find it trivial to implement the subject matter. This argument is not persuasive because it is merely an allegation without evidentiary support.

i. On page 9, last paragraph thru page 10, first paragraph, the Applicant submits that a person of ordinary skill within the art would be capable of implementing the subject

matter to which the Examiner refers; and a person of ordinary skill within the art would realize that the disclosed photodiode that detects a reflected signal can be used to detect highly reflective areas and that the recording system is well aware of writing highly reflective states. Again, this argument is not persuasive because it is merely an allegation without evidentiary support. Furthermore, as noted in the previous Office Action, it is not disclosed how the peak value detector is configured to perform the function of measuring at spots already written in a highly reflecting state is being overwritten with a highly reflecting state (see also minor objection to claim 8 above). The Applicant has failed to address this feature or properly traverse the rejection directed to this feature.

j. On page 10, paragraph 2, the Applicant traverses the rejection of claims 1-6 under 35 U.S.C. § 112, second paragraph as being incomplete and lacking essential elements. The traversal is on the grounds that “the subject matter to which the Examiner refers is found within the rejected claims”. The Applicant simply reiterates the claimed limitations, e.g., “an electronic optical recording device for optical recording on rewritable media, with which two different states can be recorded by adjusting a power level of a laser diode depending on information content to be generated on the media, characterized in that during writing of the states a beam from the laser diode is focused upon a spot that is written for one of the states, a reflection is measured from the spot of only one of the states and a measured value of the reflection is used for controlling the power of the laser diode for writing of both states”, but presents no arguments relating to the rejection. Claim 1 is deficient in several aspects, including, but not limited to: it does not have a clear boundary between the preamble and the body of the claim; it merely

recites intended use and desired results; and it does not positively recite elements that further limit the claimed electronic optical recording device. Simply put, the Applicant is claiming a device having no structure.

k. Applicant's arguments on page 10, paragraph 3, are not found persuasive. The arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out **how the language of the claims patentably distinguishes them from the references.**

l. On page 11, lines 4-5, the Applicant argues that "Aoki provides no teaching related to monitoring reflected light during writing periods". The Examiner disagrees. Column 4, line 62 thru column 5, line 16 teach a power control system provided in the recording apparatus comprising a light source for recording. The claimed "during writing periods" is interpreted by the Examiner as corresponding to Aoki's "recording". Consistent with the teachings of the prior art, it is well known that "recording" to phase-change recording media involves irradiating a light source having a power which is dynamically varied depending on whether a "crystalline" or an "amorphous" is to be written. Therefore, at any instance "during writing periods", it is expected that the light source uses either a "recording" or "erasing" power.

Furthermore, on page 11, last three lines of first paragraph, the Applicant argues that Aoki teaches away from the invention as defined by the rejected claims. This is not found persuasive. First, in light of the response to arguments above, the Examiner disagrees that Aoki teaches away from the invention. Second, the question whether a reference teaches away from the invention is inapplicable to an anticipation analysis

(*Celeritas Technologies Ltd. v. Rockwell International Corp.*, 150 F.3d 1354, 1361, 47 USPQ2d 1516, 1522-23 (Fed. Cir. 1998)).

m. Applicant's arguments on page 11, last paragraph thru page 12, first paragraph, are not found persuasive. The arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out **how the language of the claims patentably distinguishes them from the references**. The Applicant also presents arguments similar to those already presented for previous claims, to which the Examiner has already responded.

n. On page 12, paragraph 2, regarding claim 7, the Applicant presents arguments similar to those presented for previous claims, to which the Examiner has already responded.

o. On page 13, paragraph 2, the Applicant presents arguments regarding the Examiner's taking of Official Notice, to which the Examiner has already responded.

12. Applicant's arguments with respect to new claims 13-20 (see page 13, last paragraph) have been fully considered but they are not persuasive.

The Applicant believes that claims 13-20 are allowable. The Examiner disagrees. The claimed limitations are found in the prior art as described in the 103 rejection above.

Conclusion

13. Applicant's amendment, i.e., the addition of claims 13-20, necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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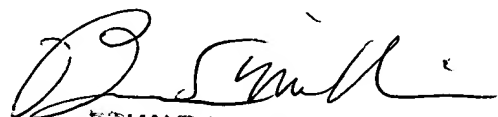
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to P. Agustin whose telephone number is 571-272-7567. The examiner can normally be reached on Monday-Friday 9:30-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, A. L. Wellington can be reached on 571-272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

P. V. Agustin
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P. V. AGUSTIN
PATENT EXAMINER